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| 09/528,457      | 03/17/2000  | Mukesh Dalal         | 020431.0671         | 4373             |

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EXAMINER

MCALLISTER, STEVEN B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3627

DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/528,457

Applicant(s)  
Dalal

Examiner  
Steven McAllister

Art Unit  
3627



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on May 6, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other:  |

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## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the steps of “determining a first optimal value according to the first optimization problem” and “determining a second optimal value according to the second optimization problem” must be shown or the feature(s) canceled from claims 1-47. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. Claims 1-47 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 17 and 33 recite “generating a global solution to a global optimization problem in accordance with the first optimal value, the second optimal value, the first value, and the second value”, but the specification does not disclose how to generate a global solution according

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to these four values. While the specification, including Figs. 4 and 5 describe a process using first and second values comprising the threshold values T1 and T2, it does not disclose the use of four values. One of ordinary skill in the art would not be able to practice the claimed invention without undue experimentation.

Claims 1, 17 and 33 recite “determining a first optimal value according to the first optimization problem” and ““determining a second optimal value according to the second optimization problem”, but the specification does not disclose how to arrive at the first and second optimum values. One of ordinary skill in the art would not be able to practice the invention as claimed without undue experimentation.

3. Claims 1-47 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. That the first and second optimization problems are each determinate systems so that they can be separately solved for their respective first and second optimum values is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). That the first and second optimization problems must be solvable for their respective optimum values is not shown in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 1-47 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements or steps, such omission amounting to a gap between the elements or steps. See MPEP § 2172.01. The omitted elements are: that the first and second optimization problems have constraint equations and objectives such that an optimal value can be determined for the objectives. For instance, it is noted that in Fig. 2, objective 34A is to maximize X and Y. However, the solution which maximizes X ( $X=36.7$ ,  $Y=26.7$ ) is not the solution which maximizes Y ( $X=Y=33.3$ ). Further, the written specification and figures are inconsistent regarding the example used. The specification discusses maximizing "X+Y", but the figures show maximizing "X and Y". It is not clear what solution is intended to represent the optimal solution.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-10, 15-26, and 31-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiessen (5,495,412).

Theissen shows accessing first and second optimization problems and threshold values from first and second parties, respectively, and generating a global solution to a global optimization problem (see abstract and Fig. 1). Theissen does not show determining first and second optimal values according to the first and second optimization problems, respectively (it is noted however, that the global solution would be “in accord” with first and second optimal values as broadly claimed). However, it would have been an obvious matter of design choice to determine first and second optimal values and solve the problem according to them since the specification does not show that this step is for any particular reason or solves a particular problem and it appears that the method would work equally well in either configuration.

It is further noted that were it found that the method containing the additionally claimed steps were patently distinct from the method without those steps, an election of species would be required.

As to claim 19, Thiessen shows constraints relating to global variables.

As to claim 21, Thiessen shows using linear programming to generate the global problem (abstract).

As to claim 22, Thiessen shows generating a global solution satisfying the two values (abstract).

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As to claim 23, Thiessen shows that the global solution is generated as a Pareto-optimal solution (col. 6, line 57).

As to claims 24 and 25, Thiessen shows that the global solution is generated using the fairness criteria of equal distribution (col. 10, lines 23-26).

As to claim 26, Thiessen discloses iteratively accessing additional first and second values and generating an additional global solution.

As to claim 31, Thiessen discloses mediating the negotiation substantially simultaneously with the negotiation between the parties.

As to claim 32, Thiessen discloses implementing the method on one or more computers.

As to claims 1-10, 15 and 16, Thiessen discloses the brokerage system for accomplishing the steps of the method of claims 17-26, 31 and 32.

As to claims 33-42, and 47, Thiessen inherently discloses software to accomplish the steps of the method of claims 17-26, 31 and 32 since it is disclosed that the method is accomplished via a plurality of computers and it is necessary for the computers to use such software to accomplish the method.

As to claims 11, 12, 27, 28, 43 and 44, Thiessen discloses communicating possible alternative solutions to the parties, and receiving and applying filtering information comprising a weighted preferences approach from the parties. Thiessen does not disclose accomplishing these steps after the computation of the global solution. However, it would have been an obvious

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matter of design choice to modify the method of Thiessen by accomplishing the filtering steps after the global solution had been computed since the applicant does not state that accomplishing the filtering in this manner at this time is for any particular reason or solves a particular problem and it appears that the method would work equally well in either configuration.

As to claims 13, 14, 29, 30, 45, and 46, Thiessen discloses communicating solutions to the parties and receiving selection information. It does not disclose choosing the solution via an auction approach. However, it is notoriously old and well known to use an auction to decide the owner of a particular right (in this case the right to choose the final solution). It would have been obvious to one of ordinary skill in the art to modify the method of Thiessen by auctioning the right to select from the acceptable, optimized solutions in order to efficiently assign that right by providing it to the party that values it most highly.

#### ***Response to Arguments***

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.



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*Conclusion*


10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven B. McAllister whose telephone number is (703) 308-7052.

  
Steven B. McAllister

July 22, 2002

  
Kenneth R. Rice  
Primary Examiner